IN THE CLAIMS

Please amend the claims as follows:

1. (previously presented) An electrochemical device, comprising:

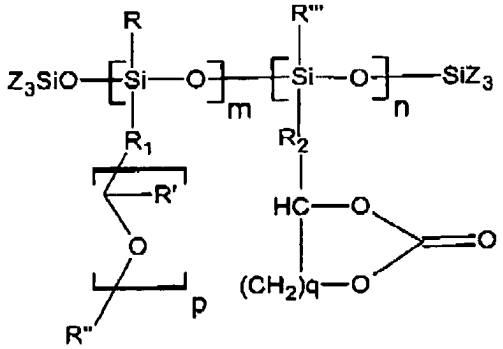
an electrolyte including a polysiloxane having one or more backbone silicons linked to a first side chain and one or more backbone silicons linked to a second side chain, the first side chains including a poly(alkylene oxide) moiety and the second side chains including a cyclic carbonate moiety.

2. (currently amended) The device of claim 1, wherein each of the non-terminal silicons in the backbone of the polysiloxane are linked to at least one side chain selected from a group consisting of the ~~a~~ first side chain and the ~~a~~ second side chain.

3. (previously presented) The device of claim 1, wherein the polysiloxane excludes Si-H groups.

4. (previously presented) The device of claim 1, wherein the first side chains include a first spacer positioned between the poly(alkylene oxide) moiety and the backbone of the polysiloxane and the second side chains include a second spacer positioned between the cyclic carbonate moiety and the backbone of the polysiloxane, the first spacer including one or more CH_2 groups and the second spacer including one or more CH_2 groups.

5. (previously presented) The device of claim 1, wherein the polysiloxane has a structure according to General Formula I:



where R is an alkyl group; R' is hydrogen or an alkyl group; R" is an alkyl group; R''' is alkyl; R_1 is an alkylene,

alkylene oxide or bivalent ether moiety; R_2 is an alkylene, alkylene oxide or bivalent ether moiety; m is greater than or equal to 1 and n is greater than or equal to 1; p is 3 to 20; q is 1 to 2; and Z is an alkyl or aryl group.

6. (previously presented) The device of claim 1, wherein the average molecular weight for the polysiloxane is less than or equal to 4000 g/mole.

7. (previously presented) The device of claim 1, wherein the electrolyte includes lithium ions and wherein a [EO]/[Li] ratio is 5 to 50, [EO] being the molar concentration of the active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

8.-37. (canceled)

38. (withdrawn) A method of generating an electrochemical device, comprising:

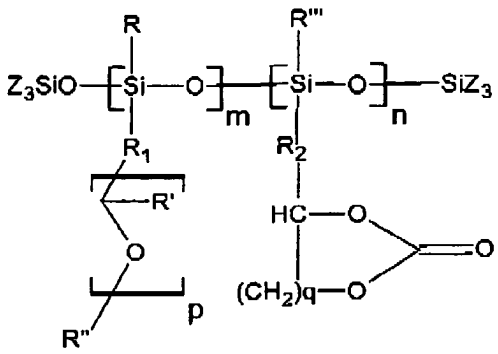
generating an electrolyte that includes

a polysiloxane having one or more backbone silicons linked to a first side chain and one or more backbone silicons linked to a second side chain, the first side chains including a poly(alkylene oxide) moiety and the second side chains including a cyclic carbonate moiety, and

a cross-linked network polymer having interstices in which the polysiloxane is positioned; and

activating one or more electrodes and one or more anodes with the electrolyte.

39. (withdrawn) The method of claim 38, wherein the first side chains include a first spacer positioned between the poly(alkylene oxide) moiety and the backbone of the polysiloxane and the second side chains include a second spacer positioned between the cyclic carbonate moiety and the backbone of the polysiloxane, the first spacer including one or more CH_2 groups and the second spacer including one or more CH_2 groups.

40. (withdrawn) The method of claim 38, wherein the polysiloxane has a structure according to General Formula I:  where R is an alkyl group; R' is hydrogen or an alkyl group; R" is an alkyl group; R''' is alkyl; R_1 is an alkylene, alkylene oxide or bivalent ether moiety; R_2 is an alkylene, alkylene oxide or bivalent ether moiety; m is greater than or equal to 1; n is greater than or equal to 1; p is 3 to 20; q is 1 to 2; and Z is an alkyl or aryl group.

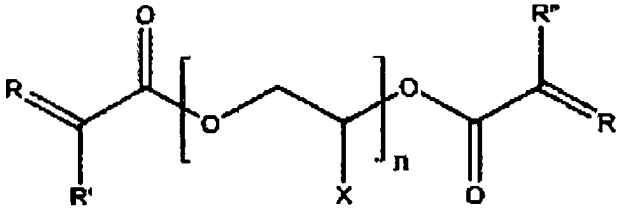
41. (withdrawn) The method of claim 38, wherein the average molecular weight for the polysiloxane is less than or equal to 4000 g/mole.

42. (withdrawn) The method of claim 38, wherein the electrolyte includes lithium ions and wherein a [EO]/[Li] ratio is 5 to 50, [EO] being the molar concentration of the active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

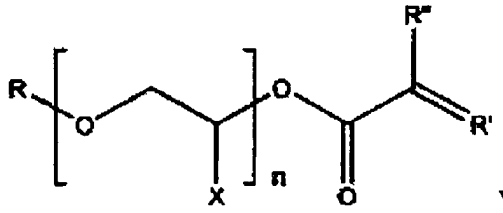
43. (withdrawn) The method of claim 38, wherein generating the electrolyte includes forming a precursor solution that includes the polysiloxane and monomers for forming the cross-linked network polymer.

44. (withdrawn) The method of claim 43, wherein the precursor solution includes a radical initiator.

45. (withdrawn) The method of claim 43, wherein one or more of the monomers are selected from a group consisting of: a dialkyl acrylate, a dimethacrylate, a diallyl terminated compound or a dialkyl methacrylate.

46. (withdrawn) The method of claim 43, wherein one or more of the monomers has a structure according to Formula IV:  wherein R is an alkyl group having 1 to 10 carbon atoms; R' is a hydrogen or an alkyl group having 1 to 10 carbon atoms or an alkenyl group having 2 to 12 carbon atoms; R" is a hydrogen or an alkyl group having 1 to 10 carbon atoms or an alkenyl group having 2 to 12 carbon atoms; X is hydrogen or a methyl group; and n represents a numeral of 1 to 15.

47. (withdrawn) The method of claim 43, wherein the precursor solution includes a control monomer for controlling cross-linking density.

48. (withdrawn) The method of claim 47, wherein the control monomer has a structure according to Formula V:  where R is an alkyl group having 1 to 10 carbon atoms, R' is an alkyl group having 1 to 10 carbon atoms; R" is hydrogen or a group selected from an alkyl group having 1 to 10 carbon atoms and/or an alkenyl group having 2 to 12 carbon atoms; X is hydrogen or a methyl group; and n represents a whole number from 1 to 20.

49. (previously presented) An electrochemical device, comprising:

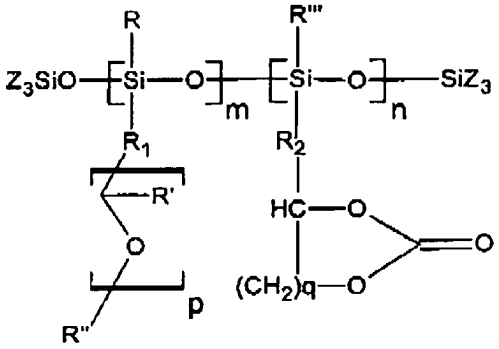
an electrolyte including

a polysiloxane having one or more backbone silicons linked to a first side chain and one or more backbone silicons linked to a second side chain, the first side chains including a poly(alkylene oxide) moiety and the second side chains including a cyclic carbonate moiety, and

a solid polymer, the solid polymer being a solid at room temperature when standing alone.

50. (canceled)

51. (previously presented) The device of claim 49, wherein the polysiloxane has a structure according to General Formula I:



where R is an alkyl group; R' is hydrogen or an alkyl group; R" is an alkyl group; R''' is alkyl; R_1 is an alkylene, alkylene oxide or bivalent ether moiety; R_2 is an alkylene, alkylene oxide or bivalent ether moiety; m is greater than or equal to 1; n is greater than or equal to 1; p is 3 to 20; q is 1 to 2; and Z is an alkyl or aryl group.

52. (previously presented) The device of claim 49, wherein the average molecular weight for the polysiloxane is less than or equal to 4000 g/mole.

53. (previously presented) The device of claim 49, wherein the electrolyte includes lithium ions and wherein a [EO]/[Li] ratio is 5 to 50, [EO] being the molar concentration of the active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

54. (previously presented) The device of claim 49, wherein the solid polymer includes one or more components selected from the group consisting of: polyacrylonitrile (PAN), poly(methyl methacrylate) (PMMA), poly(vinylidene fluoride) (PVDF), poly(vinylidene fluoride-co-hexafluoropropylene), polystyrene, polyvinyl chloride, poly(alkyl methacrylate),

poly(alkyl acrylate), styrene butadiene rubber (SBR), poly(vinyl acetate) and poly(ethylene oxide) (PEO).

55. (withdrawn) A method of forming an electrochemical device, comprising:

generating an electrolyte that includes

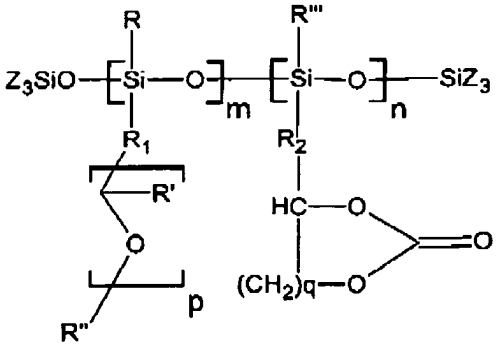
a polysiloxane having one or more backbone silicons linked to a first side chain and one or more backbone silicons linked to a second side chain, the first side chains including a poly(alkylene oxide) moiety and the second side chains including a cyclic carbonate moiety, and

a cross-linked network polymer having interstices in which the polysiloxane is positioned; and

a solid polymer, the solid polymer being a solid at room temperature when standing alone.

56. (withdrawn) The method of claim 55, wherein the first side chains include a first spacer positioned between the poly(alkylene oxide) moiety and the backbone of the polysiloxane and the second side chains include a second spacer positioned between the cyclic carbonate moiety and the backbone of the polysiloxane, the first spacer including one or more CH_2 groups and the second spacer including one or more CH_2 groups.

57. (withdrawn) The method of claim 55, wherein the polysiloxane has a structure according to General Formula I:



where R is an alkyl group; R' is hydrogen or an alkyl group; R'' is an alkyl group; R''' is alkyl; R_1 is an alkylene, alkylene oxide or bivalent ether moiety; R_2 is an alkylene, alkylene oxide or bivalent ether

moiety; m is greater than or equal to 1; n is greater than or equal to 1; p is 3 to 20; q is 1 to 2; and Z is an alkyl or aryl group.

58. (withdrawn) The method of claim 55, wherein the average molecular weight for the polysiloxane is less than or equal to 4000 g/mole.

59. (withdrawn) The method of claim 55, wherein the electrolyte includes lithium ions and wherein a [EO]/[Li] ratio is 5 to 50, [EO] being the molar concentration of the active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

60. (withdrawn) The method of claim 55, wherein the solid polymer includes one or more components selected from the group consisting of: polyacrylonitrile (PAN), poly(methyl methacrylate) (PMMA), poly(vinylidene fluoride) (PVDF), poly(vinylidene fluoride-co-hexafluoropropylene), polystyrene, polyvinyl chloride, poly(alkyl methacrylate), poly(alkyl acrylate), styrene butadiene rubber (SBR), poly(vinyl acetate) and poly(ethylene oxide) (PEO).

61. (withdrawn) The method of claim 55, wherein generating the electrolyte includes generating a precursor solution that includes the polysiloxane and the solid polymer.

62. (withdrawn) The method of claim 61, wherein generating the precursor solution includes mixing the polysiloxane and a solution that includes the solid polymer dissolved in a solvent.

63. (withdrawn) The method of claim 62, wherein generating the precursor solution includes evaporating the solvent from the precursor solution.

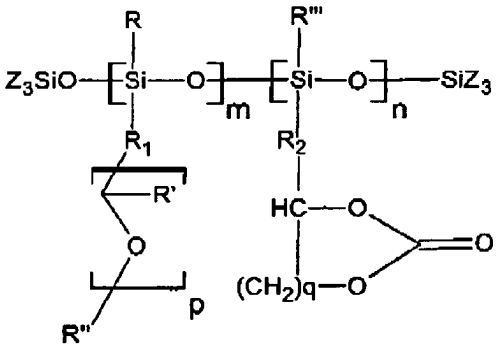
64. (withdrawn) The method of claim 61, wherein generating the precursor solution includes mixing the polysiloxane and monomers for the solid polymer.

65. (withdrawn) The method of claim 64, wherein generating the precursor solution includes polymerizing the monomer.

66. (previously presented) The device of claim 2, wherein the polysiloxane excludes Si-H groups.

67. (previously presented) The device of claim 2, wherein the first side chains include a first spacer positioned between the poly(alkylene oxide) moiety and the backbone of the polysiloxane and the second side chains include a second spacer positioned between the cyclic carbonate moiety and the backbone of the polysiloxane, the first spacer including one or more CH_2 groups and the second spacer including one or more CH_2 groups.

68. (previously presented) The device of claim 2, wherein the polysiloxane has a structure according to General Formula I:



where R is an alkyl group; R' is hydrogen or an alkyl group; R" is an alkyl group; R''' is alkyl; R_1 is an alkylene, alkylene oxide or bivalent ether moiety; R_2 is an alkylene, alkylene oxide or bivalent ether moiety; m is greater than or equal to 1; n is greater than or equal to 1; p is 3 to 20; q is 1 to 2; and Z is an alkyl or aryl group.

69. (previously presented) The device of claim 2, wherein the average molecular weight for the polysiloxane is less than or equal to 4000 g/mole.

70. (previously presented) The device of claim 2, wherein the electrolyte includes lithium ions and wherein a [EO]/[Li] ratio is 5 to 50, [EO] being the molar concentration of the

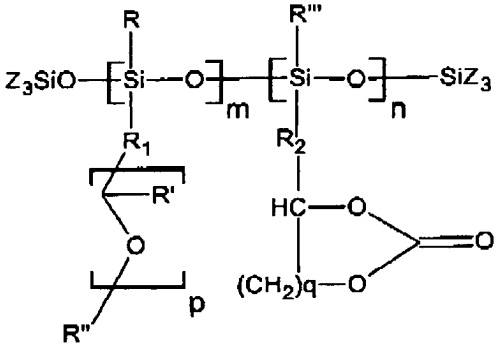
active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

71. (previously presented) The device of claim 1, further comprising:

a cross-linked network polymer having interstices in which the polysiloxane is positioned.

72. (previously presented) The device of claim 71, wherein the first side chains include a first spacer positioned between the poly(alkylene oxide) moiety and the backbone of the polysiloxane and the second side chains include a second spacer positioned between the cyclic carbonate moiety and the backbone of the polysiloxane, the first spacer including one or more CH_2 groups and the second spacer including one or more CH_2 groups.

73. (previously presented) The device of claim 72, wherein the polysiloxane has a structure according to General Formula I:



where R is an alkyl group; R' is hydrogen or an alkyl group; R" is an alkyl group; R''' is alkyl; R_1 is an alkylene, alkylene oxide or bivalent ether moiety; R_2 is an alkylene, alkylene oxide or bivalent ether moiety; m is greater than or equal to 1; n is greater than or equal to 1; p is 3 to 20; q is 1 to 2; and Z is an alkyl or aryl group.

74. (previously presented) The device of claim 71, wherein the average molecular weight for the polysiloxane is less than or equal to 4000 g/mole.

75. (previously presented) The device of claim 71, wherein the electrolyte includes lithium ions and wherein a [EO]/[Li] ratio is 5 to 50, [EO] being the molar concentration of the

active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

76. (previously presented) The device of claim 71, wherein the electrolyte is a solid.

77. (previously presented) The device of claim 71, wherein the electrolyte is a gel.

78. (previously presented) The device of claim 71, wherein the network polymer interacts with the polysiloxane so as to form an interpenetrating network.

79. (previously presented) The device of claim 71, wherein the network polymer includes a polyacrylate or a polymethacrylate.

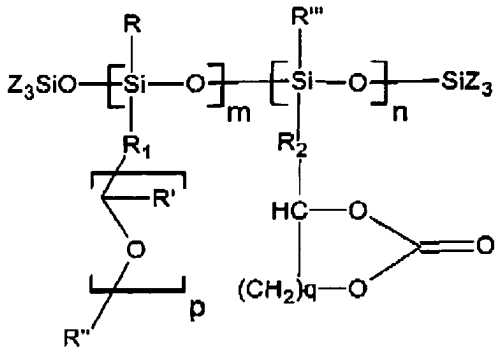
80. (previously presented) The device of claim 71, wherein the network polymer is a polymer of a dialkyl acrylate, a dimethacrylate, a diallyl terminated compound or a dialkyl methacrylate.

81. (previously presented) The device of claim 49, further comprising:

a cross-linked network polymer having interstices in which the polysiloxane is positioned.

82. (previously presented) The device of claim 49, wherein the first side chains include a first spacer positioned between the poly(alkylene oxide) moiety and the backbone of the polysiloxane and the second side chains include a second spacer positioned between the cyclic carbonate moiety and the backbone of the polysiloxane, the first spacer including one or more CH_2 groups and the second spacer including one or more CH_2 groups.

83. (previously presented) The device of claim 82, wherein the polysiloxane has a structure according to General Formula I:



where R is an alkyl group; R' is hydrogen or an alkyl group; R" is an alkyl group; R''' is alkyl; R_1 is an alkylene, alkylene oxide or bivalent ether moiety; R_2 is an alkylene, alkylene oxide or bivalent ether moiety; m is greater than or equal to 1; n is greater than or equal to 1; p is 3 to 20; q is 1 to 2; and Z is an alkyl or aryl group.

84. (previously presented) The device of claim 81, wherein the average molecular weight for the polysiloxane is less than or equal to 4000 g/mole.

85. (previously presented) The device of claim 81, wherein the electrolyte includes lithium ions and wherein a [EO]/[Li] ratio is 5 to 50, [EO] being the molar concentration of the active oxygens in the electrolyte and [Li] being the molar concentration of the lithium ions in the electrolyte.

86. (previously presented) The device of claim 81, wherein the electrolyte is a solid.

87. (previously presented) The device of claim 81, wherein the electrolyte is a gel.

88. (previously presented) The device of claim 81, wherein the network polymer interacts with the polysiloxane so as to form an interpenetrating network.

89. (previously presented) The device of claim 81, wherein the network polymer includes a polyacrylate or a polymethacrylate.

90. (previously presented) The device of claim 81, wherein the network polymer is a polymer of a dialkyl acrylate, a dimethacrylate, a diallyl terminated compound or a dialkyl methacrylate.